

## REMARKS

The amendments in the specification are by way of clarification and correction of obvious errors. The amendment in the first paragraph is correction of an obvious spelling error. The deletion of the complete paragraph corresponding to original page 4, lines 16-17 is the correction of an obvious drafting error; this paragraph obviously interrupts the paragraph at original page 4, lines 15-24, and is in any case unnecessary. The remaining amendments are made to improve the English style.

Claim 1 has been amended by incorporating therein the substance of claim 3. In addition, claim 1 has been amended to specify that the display unit comprises a plurality of pixels arranged in a plurality of rows and columns, that each row of pixels is selected in turn during the driving frame period; these additional amendments are based upon, *inter alia*, page 1, lines 8-21, and Figure 3 and the related description on pages 9-10 of the specification. Claim 3 has been cancelled as redundant over claim 1 as now amended, claim 10 has been amended in a manner parallel to claim 1, and claim 11 has been cancelled

No new matter is introduced by any of the foregoing amendments.

The obviousness-type double patent rejection set out on pages 2-3 of the Office Action is moot, since Application Serial No. 10/574,148 has been abandoned.

The 35 USC 102 rejection of claims 1-3, 5-7 and 9-11 of anticipated by Katase et al., U.S. Published Application No. 2002/0021483 is traversed. More specifically, this rejection is traversed on the grounds that Katase does not describe a display in which a setting signal is applied to a pixel electrode prior to a polarity reversal of a common electrode *which occurs after all the rows of pixels in the display have been scanned*.

Applicants concede that Katase does describe an electrophoretic display unit comprising pixels coupled to pixel electrodes and a common electrode. However, it is by no means clear in Katase that the polarity of the common electrode is reversed; the passage at Paragraph 89, lines 7 and 8 cited in the Office Action mentions a common

electrode, but does not mention any polarity reversal thereon, while Paragraphs 124-125 and 140 only mention application of the common voltage  $V_{com}$  (or a close approximation thereto – see the last four lines of Paragraph 140) to the *pixel* electrodes to reduce the electric field across the electrophoretic medium essentially to zero. It is respectfully noted that none of the numerous signal timing diagrams in the drawings of Katase plot  $V_{com}$  against time, as would be expected if  $V_{com}$  were reversed at intervals, and indeed, the plotting (see for example Figures 11 and 12) of numerous other signals relative to a  $V_{com}$  level which is apparently static strongly suggests that  $V_{com}$  in the Katase display is held constant.

Furthermore, if Katase teaches any such change in  $V_{com}$ , it is not after each complete scan of the whole display. Each of the numerous timing diagrams in the drawings of Katase illustrates on horizontal scanning period, i.e., the period necessary to write a single line of the display. See, for example, Paragraph 23 of Katase, which refers to dividing a single horizontal scan into three separate intervals. Although the specification of Katase is far from clear, it appears that Katase is in fact describing a pulse width modulation technique in which a gray scale is achieved by setting the voltage of each pixel electrode to a value different from  $V_{com}$  during the first part of a writing period (the duration of the first part varying with the desired gray level) and then the pixel electrode is set to a value substantially the same as  $V_{com}$ , thereby reducing the field across the electrophoretic medium to zero and maintaining the same gray level. This is entirely consistent with, for example Figure 13 of Katase and its Abstract. There is absolutely nothing in Katase to suggest reversing the polarity of  $V_{com}$  between successive scanning frames, as now required by all the present claims.

The 35 USC 103 rejection of claims 4 and 8 of unpatentable over Katase is traversed for the same reasons as the 35 USC 102 rejection discussed above. For the reasons already stated, there is no reason to modify the pulse width modulation technique of Katase to include reversal of the polarity of the common electrode between scanning frames.

*Zhou et al.*  
*Serial No. 10/574,146*  
*Amendment of December 17, 2009*  
*Page 8*

For the foregoing reasons, the 35 USC 102 and 103 rejections are unjustified and should be withdrawn.

Reconsideration and allowance of all claims remaining in this application is respectfully requested.

Since the period prescribed for responding to the Office Action expired September 17, a Petition for a three month extension of this period is filed herewith/

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